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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,709	10/13/2000	David Leonard Juzswik	TRW(TE)5006	8485

26294 7590 04/08/2003

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EXAMINER

PREVIL, DANIEL

ART UNIT	PAPER NUMBER
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2632

DATE MAILED: 04/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/687,709

Applicant(s)

JUZSWIK, DAVID LEONARD

Examiner

Daniel Previl

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 31-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/752,951. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are arguably broader than claim 1 of Application No. 09/752,951 which encompasses the same metes, bounds, and limitations. Therefore, it would have been obvious to eliminate the limitations of the narrower claims, since it has been held that omission of an element and its function and a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *Re Karlson*, 136 USPQ 184.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 31-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 10 of copending Application No. 09/753,290. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are arguably broader than claim 10 of Application No. 09/753,290 which encompasses the same metes, bounds, and limitations. Therefore, it would have been obvious to eliminate the limitations of the narrower claims, since it has been held that omission of an element and its function and a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *Re Karlson*, 136 USPQ 184.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Davis (US 3,810,090).

Art Unit: 2632

Regarding claim 15, Davis teaches a sensor 37 associated with a tire 32 for sensing at least one tire condition (col. 7, lines 42-47); a radio frequency transmitter 40 associated with the tire 32 operatively connected to sensor 37 for transmitting a radio frequency signal that indicated the sensed tire condition (col. 1, lines 35-42); communication means 36 having a first portion associated with the tire 32 and operatively connected to radio frequency transmitter 40 and a second portion associated with the vehicle 30 (fig. 1; col. 3, lines 48-64); for communicating a request from the vehicle 30 to radio frequency transmitter 40 to transmit the radio frequency signal indicates the sensed tire condition (system 36 warns the operator of the vehicle 30 in the event of an abnormality of a pneumatic pressure (col. 3, lines 21-32).

3. Claims 43-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Mendez et al. (US 5,612,671).

Regarding claims 43-44, Mendez teaches the step of outputting in response to control from the vehicle based unit 20, a low frequency signal (antenna 16) for reception by the tire condition sensor unit (low tire pressure signal) (fig. 1; col. 2, lines 34-52); outputting a radio frequency signal that conveys a fixed tire identification (each sender has a unique identification code (ID)) (col. 2, lines 35-40) and the tire condition information from the tire condition sensor unit (low tire pressure signal) for reception by the vehicle-based unit (processor 20) (col. 2, lines 34-61).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis, Jr. et al. (US 3,810,090) in view of Mendez (US 5,612,671).

Regarding claim 1, Davis discloses a sensor 37 for sensing the tire condition (senses a low pressure condition in a pneumatic tire) (abstract; col. 1, lines 35-37); a radio frequency transmitter means 40 operatively connected to sensor 37 for transmitting a radio frequency signal that indicates the sensed tire condition (a transmitter fixed to each support and being rotatable therewith and actuated by its associated sensing means to provide pulse modulated output signals at a radio frequency in response to the low pressure condition) (col. 1, lines 38-42).

Davis discloses every feature of the claimed invention but fails to explicitly disclose a low frequency receiver means, operatively connected to radio frequency transmitter means, for receiving a low frequency initiation signal and for causing radio frequency transmitter means to transmit the radio frequency

signal indicative of the sensed tire condition in response to receipt of the low frequency initiation signal.

However, Mendez discloses a low frequency receiver means, operatively connected to radio frequency transmitter means, for receiving a low frequency initiation signal and for causing radio frequency transmitter means to transmit the radio frequency signal indicative of the sensed tire condition in response to receipt of the low frequency initiation signal (transmitted signals are received by an antenna 16 coupled to a receiver 18, the receiver output data is fed to processor 20 which evaluates the data and issues a low tire pressure signal) (col. 2, lines 35-61; col. 3, lines 1-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mendez in Davis. Doing so would verify accurately the operability of each tire by monitoring efficiently when a tire pressure drop below a predetermined threshold in order to alert the operator to take appropriate measure by replacing or fixing the tire to avoid accident.

Regarding claim 2, the above combination discloses all the limitations in claim 1 and Mendez further discloses switch 34 and processor 20 are part of a tire condition communication system and low frequency receiver is a first part of communication means (issue a low tire pressure signal in response to a message indicate condition of the tire) (col. 2, lines 47-49), low frequency

transmitter is a second part of communication means connected to vehicle based unit (processor 20) communication means for communicating a request from vehicle based unit to tire condition sensor unit via the low frequency initiation signal to cause the transmission of the radio frequency signal (col. 2, lines 35-67; col. 3, lines 1-35).

Regarding claim 3, Davis discloses first and second magnetic induction antennas (col. 4, lines 61-68; col. 5, lines 1-22).

Regarding claim 4, the above combination discloses all the limitations in claim 1 and Mendez further discloses identification to vehicle-based unit (col. 2, lines 34-46).

Regarding claim 5, the above combination discloses all the limitations in claim 1 and Mendez further discloses a vehicle based unit including means for storing the identification (storage of the ID) (col. 2, lines 43-46).

Regarding claim 6, the above combination discloses all the limitations in claim 1 and Mendez further discloses pairing the stored identification with a tire location (col. 2, lines 34-46; col. 1, lines 37-49).

Regarding claim 7, the above combination discloses all the limitations in claim 1 and Mendez further discloses vehicle speed to vary rate of repeat occurrence of the transmission of the initiation signal (col. 2, lines 62-65).

Regarding claim 8, the above combination discloses all the limitations in claim 1 and Mendez further discloses a controller 26 and pressure switch 36 and rf transmitter 28 for controlling operation of tire condition sensor means (fig. 2).



Regarding claims 9-10, the above combination discloses all the limitations in claim 1 and Mendez further discloses RF transmitter is connected to memory means, also indicates the fixed identification associated with the tire (fig. 1).

Regarding claim 11, the above combination discloses all the limitations in claim 1 and Mendez further discloses memory means is capable of learning new identifications (learn the Ids) abstract).

Regarding claim 12, the above combination discloses all the limitations in claim 1 and Mendez further discloses switch 34 and processor 20 are part of a tire condition communication system and low frequency receiver is a first part of communication means (issue a low tire pressure signal in response to a message indicate condition of the tire) (col. 2, lines 47-49), low frequency transmitter is a second part of communication means connected to vehicle based unit (processor 20) communication means for communicating a request from vehicle based unit to tire condition sensor unit via the low frequency initiation signal to cause the transmission of the radio frequency signal (col. 2, lines 35-67; col. 3, lines 1-35).

Regarding claim 13, the above combination discloses all the limitations in claim 1 and Mendez further discloses communication means does not convey identification information (abstract).

Regarding claim 14, Davis discloses sensor means senses tire inflation pressure as the sensed tire condition (col. 7, lines 42-47; col. 8, lines 1-2).

3. Claims 16-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis in view of Mendez.

Regarding claim 16, Davis discloses all the limitations in claim 15 but fails to explicitly disclose low frequency receiver means for receiving a low frequency initiation signal and for causing radio frequency transmitter means to transmit the radio frequency signal in response to receipt of the low frequency initiation signal.

However, Mendez discloses a low frequency receiver means, operatively connected to radio frequency transmitter means, for receiving a low frequency initiation signal and for causing radio frequency transmitter means to transmit the radio frequency signal indicative of the sensed tire condition in response to receipt of the low frequency initiation signal (transmitted signals are received by an antenna 16 coupled to a receiver 18, the receiver output data is fed to processor 20 which evaluates the data and issues a low tire pressure signal) (col. 2, lines 35-61; col. 3, lines 1-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mendez in Davis. Doing so would verify accurately the operability of each tire by monitoring efficiently when a tire pressure drop below a predetermined threshold in order to alert the operator to take appropriate measure by replacing or fixing the tire ID to avoid accident.

Regarding claim 17, Davis discloses first and second magnetic induction antennas (col. 4, lines 61-68; col. 5, lines 1-22).

Regarding claim 18, the above combination discloses all the limitations in claim 166 and Mendez further discloses a radio frequency receiver 18 associated with the vehicle 10 for receiving the radio frequency signal that indicates the sensed tire condition (fig. 1).

Regarding claim 19, Davis discloses sensor means senses tire inflation pressure as the sensed tire condition (col. 7, lines 42-47; col. 8, lines 1-2).

Regarding claim 20, Davis discloses indicator means for providing an indication of sensed tire condition (col. 6, lines 37-40).

Regarding claim 21, Davis discloses indicator means also indicating tire location (col. 5, lines 45-49).

Regarding claim 22, the above combination discloses all the limitations in claim 16 and Mendez further discloses radio frequency transmitter 14 for transmitting Id to determine tire location (col. 1, lines 37-49).

Regarding claim 23, the above combination discloses all the limitations in claim 16 and Mendez further discloses storing identification with a tire location (col. 2, lines 34-46; col. 1, lines 37-49).

Regarding claim 24, the above combination discloses all the limitations in claim 16 and Mendez further discloses the step of updating the stored identification (new ID is copied from the buffer) (col. 4, lines 33-34).

Regarding claim 25, the above combination discloses all the limitations in claim 16 and Mendez further discloses number of times an identification is received (col. 3, lines 36-65).

Regarding claim 26, the above combination discloses all the limitations in claim 1 and Mendez further discloses vehicle speed to vary rate of operation (col. 2, lines 62-65).

Regarding claims 27-28, the above combination discloses all the limitations in claim 1 and Mendez further discloses RF transmitter is connected to memory means, also indicates the fixed identification associated with the tire (fig. 1; col. 1, lines 37-49).

Regarding claim 29, the above combination discloses all the limitations in claim 1 and Mendez further discloses memory means is capable of learning new identifications (learn the IDs) abstract).

Regarding claim 30, the above combination discloses all the limitations in claim 1 and Mendez further discloses communication means does not convey identification information (not functioning ID) (abstract).

Regarding claims 31, 34, Davis discloses a sensor 37 associated with a tire 32 for sensing at least one tire condition (col. 7, lines 42-47); a radio frequency transmitter 40 associated with the tire 32 operatively connected to sensor 37 for transmitting a radio frequency signal that indicated the sensed tired condition (col. 1, lines 35-42); communication means 36 having a first portion associated with the tire 32 and operatively connected to radio frequency

transmitter 40 and a second portion associated with the vehicle 30 (fig. 1; col. 3, lines 48-64); for communicating a request from the vehicle 30 to radio frequency transmitter 40 to transmit the radio frequency signal indicates the sensed tire condition (system 36 warns the operator of the vehicle 30 in the event of an abnormality of a pneumatic pressure (col. 3, lines 21-32).

Davis discloses every feature of the claimed invention but fails to explicitly disclose a memory means, associated with the tire, for holding a fixed identification associated with the tire.

However, Mendez discloses a memory means (EEPROM), associated with the tire (tire), for holding a fixed identification associated with the tire (abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mendez in Davis. Doing so would verify accurately the operability of each tire by monitoring efficiently when a tire pressure drop below a predetermined threshold in order to alert the operator to take appropriate measure by replacing or fixing the tire ID to avoid accident.

Regarding claim 32, the above combination discloses all the limitations in claim 31 and Mendez further discloses a low frequency receiver means, operatively connected to radio frequency transmitter means, for receiving a low frequency initiation signal and for causing radio frequency transmitter means to

transmit the radio frequency signal indicative of the sensed tire condition in response to receipt of the low frequency initiation signal (transmitted signals are received by an antenna 16 coupled to a receiver 18, the receiver output data is fed to processor 20 which evaluates the data and issues a low tire pressure signal) (col. 2, lines 35-61; col. 3, lines 1-18).

Regarding claim 33, Davis discloses first and second magnetic induction antennas (col. 4, lines 61-68; col. 5, lines 1-22).

Regarding claim 35, the above combination discloses all the limitations in claim 1 and Mendez further discloses memory means is capable of learning new identifications (learn the Ids) abstract).

Regarding claim 36, the above combination discloses all the limitations in claim 31 and Mendez further discloses counting the number of receptions of an identification to determine whether to learn a new identification (col. 4, lines 20-56).

Regarding claim 37, the above combination discloses all the limitations in claim 1 and Mendez further discloses communication means does not convey identification information (not functioning ID) (abstract).

Regarding claim 38, Davis discloses sensor means senses tire inflation pressure as the sensed tire condition (col. 7, lines 42-47; col. 8, lines 1-2).

Regarding claim 39, Davis discloses indicator means for providing an indication of sensed tire condition (col. 6, lines 37-40).

Regarding claim 40, Davis discloses indicator means also indicating tire location (col. 5, lines 45-49).

Regarding claim 41, Davis discloses means for controlling communication means responsive to a vehicle condition (fig. 1).

Regarding claim 42, the above combination discloses all the limitations in claim 31 and Mendez further discloses vehicle speed (col. 2, lines 62-65).

4. Claims 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez in view of Davis.

Regarding claim 45, Mendez discloses every feature of the claimed invention but fails to explicitly disclose the step of indicating the sensed conditions and tire locations to a vehicle operator.

However, Davis discloses indicator means for providing an indication of sensed tire condition (col. 6, lines 37-40); indicator means also indicating tire location (col. 5, lines 45-49).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Davis in Mendez. Doing so would detect accurately any tire abnormality to warn the operator to take appropriate measures to avoid accident.

Regarding claim 46, the above combination discloses all the limitations in claim 31 and Mendez further discloses outputting the low frequency signal for

reception by the tire condition sensor unit in response to a vehicle condition (col. 2, lines 34-61).

Regarding claim 47, the above combination discloses all the limitations in claim 31 and Mendez further discloses comparing the conveyed tire identification with a stored identification at the vehicle (col. 2, lines 37-45).

Regarding claim 48, the above combination discloses all the limitations above and Mendez further discloses the step of updating the stored identification at the vehicle via provision of a new identification from a tire condition sensor unit (col. 4, lines 7-48).

5. Claims 49-50, 55, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez.

Regarding claims 49, 55, Mendez discloses Mendez teaches the step of outputting in response to control from the vehicle based unit 20, a low frequency initiation signals (antenna 16, antenna 32), each low frequency initiation signal being for reception by a different tire condition sensor unit (low tire pressure signal) (fig. 1; col. 2, lines 34-52); each tire condition sensor unit outputting in response to receipt of the respective low frequency initiation signal (fig. 1); a radio frequency signal that conveys a fixed tire identification (each sender has a unique identification code (ID)) (col. 2, lines 35-40) and the tire condition information from the tire condition sensor unit (low tire pressure signal) for reception by the vehicle-based unit (processor 20) (col. 2, lines 34-61).



Although, Mendez discloses every feature of the claimed invention but fails to specify sequentially outputting. Since, Mendez discloses a plurality of tires 12 with a plurality of antennas 16, 32 (fig. 1-fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to sequentially transmit or receive antenna signals to display correct information about tire condition.

Regarding claim 50, Mendez discloses outputting the radio frequency response signals includes outputting the response signals to convey fixed tire identification (col. 2, lines 34-52).

6. Claims 51-54, 56, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez in view of Davis.

Regarding claims 51, 56, Mendez discloses all the limitations in claim 49 but fails to specify that indicating the sensed conditions and tire locations to a vehicle operator.

However, Davis discloses indicator means for providing an indication of sensed tire condition (col. 6, lines 37-40); indicator means also indicating tire location (col. 5, lines 45-49; col. 3, lines 21-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Davis in Mendez.

Art Unit: 2632

Doing so would detect accurately any tire abnormality to warn the operator to take appropriate measures to avoid accident.

Regarding claim 52, Mendez discloses comparing the conveyed tire identification with stored identification at the vehicle (col. 2, lines 35-61).

Regarding claim 53, Mendez discloses the step of updating a stored identification at the vehicle via provision of a new identification (col. 4, lines 7-49).

Regarding claim 54, Mendez discloses outputting the low frequency signals for reception by the tire condition sensor units in response to a vehicle condition (col. 2, lines 35-67).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koch et al. (US 5,573,610) discloses tires containing a monitoring device for monitoring an engineering condition therein.

Jo et al. (US 5,883,305) discloses a tire pressure monitoring system.

Oldenettel et al. (US 6,435,020) discloses a method for allocating tire pressure control devices to wheel positions in a tire pressure control system of a motor vehicle.

Momose et al. (US 6,362,733) discloses a tire inflation pressure monitor and monitoring method.

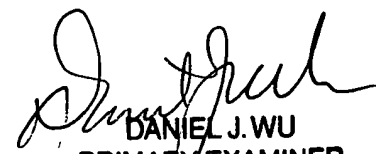
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel WU can be reached on 703 308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Daniel Previl  
Examiner  
Art Unit 2632

DP  
March 28, 2003

  
DANIEL J. WU  
PRIMARY EXAMINER  
4/06/03